

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )

Revision of Part 22 and )  
Part 90 of the Commission's )  
Rules to Facilitate Future )  
Development of Paging )  
Systems )

WT Docket No. 96-18

Implementation of )  
Section 309(j) of the )  
Communications Act-- )  
Competitive Bidding )

PP Docket No. 93-253

To: The Commission

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COMMENTS OF PRONET INC.  
ON GEOGRAPHIC LICENSING AND COMPETITIVE BIDDING

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COMMENTS OF PRONET INC.  
ON GEOGRAPHIC LICENSING AND COMPETITIVE BIDDING

ProNet Inc. ("ProNet"), through its attorneys and pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.415, hereby submits its Comments with respect to the Notice of Proposed Rulemaking in the above-captioned proceeding ("NPRM").

I. INTRODUCTION AND SUMMARY

ProNet is a publicly-traded company with extensive experience in developing and operating wide-area paging networks. Although ProNet initially focused on providing service to hospitals and medical professionals using Special Emergency Medical Service ("SERS") as well as private carrier paging ("PCP") frequencies in the Business Radio and 929 MHz bands, the company now serves approximately 1,000,000 subscribers and operates in common carrier paging ("CCP") and PCP bands alike.

As explained below, ProNet generally supports the Commission's proposed conversion to geographic licensing, but is concerned that certain aspects of the proposal will lessen competition in the paging market, constrain incumbents licensees from expanding geographic coverage and from incorporating advanced, high speed signalling technology into their systems, and otherwise cause licensees unnecessary harm. To deter these untoward consequences, ProNet urges the Commission to modify the NPRM proposals in the following critical respects:

- Shared PCP channels, and paging channels in the Special Emergency Radio Service ("SERS") should be exempt from geographic licensing;
- Geographic licensees should be afforded the flexibility to partition, alienate and return licenses in whole or in part, allowing the market to determine system coverage;
- Reversion of incumbent licensees' "lost" territory (unconstructed facilities or expired licenses) to geographic licensees should not apply to territory internal to the incumbent system;
- Incumbents serving the majority of a BTA within an MTA should be afforded expansion rights up to the BTA boundary;
- Incumbents should be allowed to relocate sites lost due to circumstances beyond their control, even if causing a minor expansion to their service area;
- The Commission should retain the existing interference contour definition in Section 22.537(f) for both 931 and 929 MHz bands (rather than adopting the proposed 21 dBµV/M formula); and
- Simultaneous multiple round auctions should be utilized, with no license grouping and Milgrom-Wilson activity rules.

Pronet's recommended revisions to the NPRM are discussed below in detail.

## II. GEOGRAPHIC LICENSING

ProNet generally supports the proposed conversion to geographic licensing with regard to 900 MHz and low-band CCP paging channels. This conversion will eliminate vast numbers of individual site applications presently required for system expansion, enabling more rapid system growth while preserving the valuable time and resources of licensees and the Commission. The proposal, however, is inappropriate for shared PCP and SERS frequencies, which should be expressly insulated from geographic licensing.

Further, the Commission should regard its adoption of some geographic abstraction-- BTA, MTA, MSA, state, etc.-- as the basis for market paging licenses as a necessary evil, rather than the achievement of a specific public interest objective. To make sure that economic decisions by paging licensees are dictated by market forces rather than the arbitrary selection of a single defining standard, the Commission must make sure that "geographic licensees" have essentially unfettered flexibility to partition, alienate and return their license in whole or in part.<sup>1/</sup>

### A. Shared PCP and SERS Channels Must Be Exempt From Geographic Licensing

Shared PCP and SERS paging channels are particularly ill-suited for geographic licensing and competitive bidding. In concluding this proceeding, the Commission must unequivocally exclude these classes of frequencies from the market area licensing

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<sup>1/</sup> As used herein, "geographic licensee" has the same meaning assigned to this term as set forth in the NPRM.

and auctions that will apply to other frequency bands.

1. Shared PCP Channels

The shared PCP channels<sup>2/</sup> are licensed on a non-exclusive basis, and are subject to prior coordination and operational requirements designed to minimize interference. Under these procedures, an extremely complex array of private and commercial networks have developed, serving internal business needs, health and safety organizations, and public subscribers. As the Commission has acknowledged, virtually all of the available spectrum is occupied on these channels.<sup>3/</sup>

Existing channel congestion, and the multiplicity of systems sharing these frequencies in any geographic area make this spectrum extremely difficult to reconcile with an exclusive licensing scheme. In addition, as A+ Network, Inc. stated in its Comments on the NPRM's Interim Licensing Proposal (at 6-8), the non-exclusivity and intense usage of these channels will unavoidably constrain their revenue producing value at auction.

Further, existing operating procedures under Section 90.403 of the Commission's Rules adequately govern spectrum sharing; thus, there is no need to abandon the sharing environment. The Commission reached this conclusion in 1993,<sup>4/</sup> and ProNet is unaware

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<sup>2/</sup> These channels include five 929 MHz channels, as well as the 152/158, 462 and 465 MHz channels. NPRM at ¶3.

<sup>3/</sup> See Amendment of the Commission's Rules to Provide Channel Exclusivity to Qualified Private Paging Systems at 929-930 MHz, Report and Order (PR Docket No. 93-35), 8 FCC Rcd 8318, 8331 (1993) ("PCP Exclusivity Order").

<sup>4/</sup> See PCP Exclusivity Order, at 8331.

of any significant changed circumstances that would warrant a wholesale reversal of the PCP Exclusivity Order.

Nor does ProNet believe that limiting additional licensing on these frequencies once an arbitrary number of transmitters are operating in some pre-determined area, as proposed by PCIA, is rational. Frequency coordination already provides a check on new licensing, while enabling additional licensing by private and medical systems without subjecting those entities to competitive bidding.<sup>5/</sup> The shared PCP channels should, therefore, continue to be licensed under existing procedures.<sup>6/</sup>

## 2. Special Emergency Radio Service

Consistent with their classification as non-commercial services, SERS paging channels<sup>7/</sup> receive no mention in the NPRM. Counsel for ProNet has been advised by Commission staff that these channels are outside the scope of the NPRM's geographic licensing and competitive bidding proposals, and the Interim Licensing Proposal, as well. This verbal advice must be expressly stated in

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<sup>5/</sup> Notably, medical and public safety pages are afforded priority under Section 90.403(d) of the Rules.

<sup>6/</sup> Subject to further clarification, however, ProNet is willing to accept the position set forth by Airtouch at pp.4-5 of its Reply Comments on the Interim Licensing Proposal, filed March 11, 1996.

<sup>7/</sup> The principal SERS paging frequencies are 152.0075, 163.250 and, 453.025, 453.075, 453.125 and 453.175 MHz. Authority to provide SERS paging on the four 453 MHz channels expires in 1998, although incumbent licensees on those channels may seek a permanent waiver of this limitation. See Amendment of Part 90 of the Commission's Rules to Create the Emergency Medical Radio Service, PR Docket No. 91-72, 8 FCC Rcd 1454, 1459 (1993); aff'd, Memorandum Opinion and Order, PR Docket No. 91-72, released February 8, 1996.

writing to eliminate needless uncertainty among carriers providing emergency paging service to the medical community.

In addition, ProNet's medical paging systems in Los Angeles, CA, Boston, MA, and New York, NY operate on non-SERS channels.<sup>8/</sup> The public interest considerations regarding SERS apply equally to these systems. Accordingly, the Commission should entertain waivers of the geographic licensing rules for systems providing emergency medical paging to SERS eligibles on exclusive or non-exclusive 929 MHz spectrum and establish standards by which such waiver requests will be granted.

**B.    The Service Area Definition and Minimum Coverage Requirements Must Be More Flexible**

ProNet can accept Major Trading Areas ("MTAs") as the standard geographic area for licenses awarded pursuant to competitive bidding. Larger service areas such as Regional Areas might appear inassimilable to many incumbents and thereby deter them from seeking geographic licenses; smaller geographic areas, such as BTAs, could prove too diminutive, which could constrain system integration and may prove administratively inefficient.

ProNet also endorses the Commission's proposal (NPRM at ¶40-43) to impose minimum coverage area requirements on geographic licensees, and finds the specific requirements-- service to one-third of the MTA population within three years, and two-thirds within five years-- to be reasonable. ProNet also advocates

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<sup>8/</sup> The Los Angeles and Boston systems operate on the non-exclusive 462.875 MHz channel; the New York system operates on the exclusive 929.3625 MHz channel.

enforcing these requirements without regard the incumbent licensee's coverage footprint in the market. NPRM at ¶43. These requirements should effectively deter speculators and rivals from participating in an auction for extortionate or anti-competitive purposes, while encouraging incumbents to obtain geographic licenses.

Nevertheless, MTAs cannot constitute an optimal service area in every situation. Any geographic area standard ultimately adopted in this proceeding will, by definition, be arbitrary and, if rigidly imposed, will likely distort economic decisions in the paging market.

MTAs differ with respect to population density, geographic territory and extent of coverage by incumbent carriers. In many MTAs, population is concentrated in a large metropolitan area. If the incumbent licensee on a particular frequency in that metropolitan area becomes the geographic licensee, it may defer extending service to outlying areas, even small population centers in need of competitive paging service.<sup>2/</sup> Alternatively, in MTAs where the geographic licensee is concentrated in a BTA that does not contain a majority of the MTA population, the Commission's proposed coverage requirements would mandate system expansion, even if beyond the scope of the licensee's financial, technical and

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<sup>2/</sup> For illustration, the Dallas-Fort Worth, Texas MTA includes areas such as Shreveport, LA, approximately 180 miles from Dallas. Carriers who already cover the Dallas-Fort Worth area may reasonably choose to forego the considerable expense of designing and installing facilities, not to mention establishing administrative and marketing offices so remotely located from their base of operation.

administrative capabilities. In these situations, the Commission's objective of comprehensive availability of service will conflict with the imperative to allow licensees to make service decisions in response to free market forces. Absent additional provisions to allow licensees increased flexibility, the proposed geographic area definition and minimum coverage requirements will limit, rather than promote, system build-out in all but the most densely populated areas, and may result in less coverage than under the present site-by-site licensing scheme.

To alleviate these concerns, ProNet urges the Commission to modify its geographic licensing proposal to allow market partitioning. Specifically, the Commission should allow (1) liberal partitioning of MTAs by any auction winner,<sup>10/</sup> (2) free alienation of MTA partitions by geographic licensees,<sup>11/</sup> and (3) return of MTA partitions to the Commission for re-auction. Coverage requirements should then pertain only to the territory retained by the geographic licensee, with the same population-based requirements imposed on licensees of partitioned territory.<sup>12/</sup>

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<sup>10/</sup> The Commission itself proposes the formation of consortia and partitioning by rural telephone companies and incumbent licensees, and suggests that this proposal be broadened. NPRM at ¶¶30, 66.

<sup>11/</sup> The Commission's use of competitive bidding, coupled with adoption of the NPRM's "unjust enrichment" proposal (¶134), will ensure that geographic licensees do not abuse alienation rights.

<sup>12/</sup> With liberal partitioning as suggested above, there should be no need for a "substantial service" alternative, which is sufficiently vague so as to be ripe for abuse by licensees merely seeking to avoid the population-based coverage requirements. While some licensees "may choose to target niche markets or provide  
(continued...)

Without detracting from the objectives of the Commission's auction proposals, this combination of options for successful bidders will:

- allow system build-out to be driven by the marketplace, rather than administrative requirements;
- afford incumbents additional opportunities to obtain geographic licenses for their existing service areas; and
- ensure that even after initial auctions are held, licenses will continue to be obtained by those who value them the most.

In addition, because many incumbent systems are BTA-based, the Commission's proposed sanction in cases where the geographic licensee fails to meet the population coverage criteria-- i.e., loss of all territory except where covered by transmitters licensed prior to auction (NPRM at ¶44)-- may disserve the public interest. A system expanded to serve an entire BTA, for example, is providing needed service, irrespective of the licensee's success in expanding elsewhere in the MTA. Revocation of a geographic license should preclude subsequent expansion, but should not require the cessation of current operations. Therefore, the Commission should not only reinstate operational sites held prior to auction, but should license sites constructed pursuant to the geographic license.

C. Protection of Adjacent Geographic Licensees

Interference protection between geographic licensees along a common border (NPRM at ¶62) is among the most complex and difficult

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<sup>12/</sup> (...continued)  
specialized services" (NPRM at ¶41), use of a geographic license merely to provide such services is ill-suited to the already congested and intensely competitive paging environment. Rather, a license to serve an entire geographic area should be issued with the expectation that a large percentage of that area will benefit from actual service provided by the geographic licensee.

addressed in this proceeding for the following reasons:

- in smaller, highly dense MTAs located in the northeastern United States, incumbents already operate along the border; any arbitrary limitation on these operations will degrade or deny service for or to existing consumers;
- imposing cross-border mileage separation requirements for facilities located within a certain distance of a common border will favor incumbents who previously licensed transmitters in close proximity to a border; these incumbents will receive the benefit but incur no burden from a separation requirement; and
- inflexibly requiring geographic licensees to reduce signal levels at the border will preclude either licensee from serving its respective border area.

ProNet is concerned that the Commission may ultimately regret any attempt to reconcile these conflicting considerations within a proceeding that already is replete with complex, difficult issues. As an interim step, the Commission should encourage co-channel, adjacent market geographic licensees to resolve interference issues through negotiation. To resolve those cases where adjacent licensee negotiations fail, the Commission should undertake a detailed examination of this issue in a further notice of proposed rulemaking.

D. Eligibility

Consistent with the NPRM ¶66, ProNet recommends that no restrictions on eligibility be imposed on applicants for geographic licensees. Heavy loading on most paging channels, coupled with the strict coverage requirements discussed above, will probably suffice to deter speculators or anti-competitive strategic bidding.

Nor should the Commission impose spectrum caps on paging licensees, either with respect to paging spectrum alone or paging

and narrowband PCS spectrum combined. With the advent of FLEX signalling protocol, a single 25 Khz paging channel will be able to accommodate 600 to 700,000 subscribers. Given this efficiency, it seems unlikely that competitive bidding will be distorted by considerations of spectrum scarcity. On the other hand, an arbitrary cap could limit a carrier's capacity to provide sophisticated services, like alphanumeric paging and complex data transmission.

### III. TREATMENT OF INCUMBENT LICENSEES

The Commission should modify its proposal to enable limited incumbent expansion where necessitated by unanticipated events, and to allow for completion of build-out in areas where a geographic licensee would be unable to provide coverage while protecting an incumbent's grandfathered operations. The Commission should also allow incumbents to expand in BTAs where the incumbent's system already covers two-thirds of the population. In addition, incumbents should be afforded interference protection based on existing, fixed separation standards rather than a new formula whose effect will be to reduce protected areas from existing levels.

#### A. Protection of Interior Sites

ProNet supports the proposal (NPRM at ¶37) to allow without Commission notification or approval any system modifications which leave the incumbent's existing interference contours unchanged. This proposal removes the burdensome requirement that such "fill-

in" transmitters remain wholly within both existing service and interference contours.<sup>13/</sup>

Incumbent licensees should also be allowed to expand beyond their existing interference contours where those contours (and corresponding service contours) are configured so as to preclude coverage by the geographic licensee (without encroaching on the incumbent's existing facilities). Allowing incumbent expansion into these areas will enable fill-in and coverage of dead spots within existing networks, and will facilitate conversion to high-speed FLEX protocols, without in any prejudice to geographic licensees.<sup>14/</sup>

ProNet also supports, with one important caveat, the NPRM's proposed requirement (at ¶22) compelling an incumbent licensee who fails to timely construct or renew authorized facilities, or discontinues operations on a permanent basis, to return the relevant service area to the geographic licensee. Sites internal to an incumbent licensee's system should be exempt from this reversion because the geographic licensee will be unable to serve this area without inflicting interference on the incumbent.

B. Incumbent Expansion Rights

The Commission asks (NPRM at ¶39) under what conditions incumbent licensees should be permitted to add transmitting facilities which extend their existing contours without consent of

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<sup>13/</sup> See Section 22.165(d) of the Commission's Rules.

<sup>14/</sup> To maintain accurate records of incumbent licensee protected areas, however, incumbents should be required to notify the Commission of such permissive modifications on FCC Form 489.

the geographic licensee. Two such conditions exist: necessary replacement or relocation of sites to preserve coverage, and system expansion within a BTA already sufficiently covered by the incumbent so as to preclude competing coverage by the geographic licensee.

1. Relocation/Replacement Sites

As suggested in the NPRM ¶39, there are certain conditions under which incumbent licensees must be afforded flexibility to modify their systems without geographic licensee consent, even where the modifications entail expansion beyond the incumbent's existing interference contours. Relocation or replacement of sites mandated by circumstances beyond the licensee's control should be permitted without geographic licensee approval. This includes instances where a transmitting site is "lost,"<sup>15/</sup> or is rendered useless due to new construction which impedes signal strength.<sup>16/</sup>

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<sup>15/</sup> Transmitting sites are "lost" by a property or tower owner's arbitrary actions, degradation of the tower or site infrastructure, or acts of nature. Any of these occurrences, which are beyond the licensee's control, necessitate relocation.

<sup>16/</sup> This exception should apply categorically to authorized, but unconstructed sites (to the extent such authorizations exist as of the adoption date of new geographic licensing rules). Section 22.142(d) of the Commission's Rules provides that a licensee who loses an authorized transmitting site prior to the end of the one-year construction period due to circumstances beyond its control may file an application requesting relocation of the transmitter; the construction period is automatically extended pending disposition of the relocation application. The Commission should make plain that incumbents' Section 22.142(d) rights will survive implementation of geographic licensing and competitive bidding.

## 2. Intra-BTA Expansion

The Commission should also allow incumbent licensees, even where precluded from expanding throughout an MTA, to respond to normal consumer needs, and to encourage conversion to new spectrally efficient technology,<sup>17/</sup> by permitting limited expansion without the geographic licensee's consent. Such expansion should be limited to the service area, in most cases a BTA, currently served by the incumbent, and should be available only to incumbents already covering two-thirds of the BTA population.<sup>18/</sup>

The reality is that on most or all available channels, incumbents already have a significant presence in large BTAs within virtually every MTA. Many incumbents may forego the corresponding geographic license, either because of disinterest in serving the entire MTA,<sup>19/</sup> or because another party prevails at auction.

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<sup>17/</sup> Virtually every medium to large paging carrier is either converting older POCSAG RF networks to new FLEX technology, constructing new FLEX systems, or planning to do one or the other. FLEX's higher signalling speed makes it typically four times as spectrally efficient as the POCSAG protocol it replaces-- precisely the type of technological innovation the Commission customarily and enthusiastically supports. Because FLEX requires an elevated signal level at the paging receiver, however, more transmitters are needed to serve the same geographic area with FLEX than with POCSAG. If, for example, a single site 512 baud POCSAG transmitter can serve a circular area with a twenty mile radius, as many as four transmitters may be necessary to cover the same area when converting to 6400 baud FLEX.

<sup>18/</sup> The two-thirds population coverage requirement is consistent with the Commission's proposed coverage requirements for geographic licensees.

<sup>19/</sup> Assuming ProNet's concept of unlimited partitioning and alienability is adopted, this reason for bypassing geographic licenses will diminish.

Moreover, the incumbent system is likely to physically block the geographic licensee from effectively serving the BTA. In such cases, it would disserve the public interest to preclude the incumbent from improving its system wholly within the BTA, even where these improvements produce slight extensions of existing interference contours.<sup>20/</sup>

C. Interference Protection

As discussed above, ProNet supports the Commission's plan to rely solely on interference contours to define incumbent systems for purposes of expansion and interference protection. This proposal will greatly simplify Commission record-keeping and processing, and will reduce licensee filing burdens. Likewise, the Commission's proposal to leave undisturbed its current rules defining interference contours for low-band CCP channels, and providing for cooperative interference-prevention by shared channel PCP licensees should be adopted. In addition, ProNet agrees that the Commission should adopt a uniform interference contour for 929 and 931 MHz, based on Section 22.537(f) of the Rules.

ProNet opposes the Commission's proposal (NPRM at ¶¶49-55) to replace the existing fixed radii standard for determining service and interference contours for 929 and 931 MHz paging facilities<sup>21/</sup> with a mathematical formula that generates an eight radial contour,

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<sup>20/</sup> In most cases, the extensions necessitated by a BTA incumbent will be minimal; ProNet expects that few incumbents' modifications will be beyond existing 70 mile minimum interference contours.

<sup>21/</sup> See Sections 22.537(f) and 90.495(d) of the Rules.

which assumes a median field strength of 21 dBµV/M for interference contours, 47 dBµV/M for service contours. This change serves no purpose and will impose significant burdens on the industry; it should be rejected.

The new formula reduces the interference contour of most 900 MHz transmitters.<sup>22/</sup> Considering the vast number of transmitting sites affected by this proposal, the cumulative effect of this proposal will:

- shrink the geographic areas of incumbents protected by the pre-existing interference contour rules by tens of thousands of square miles, curtailing service availability and quality to current and prospective customers;<sup>23/</sup>
- invalidate the design of all 929/931 MHz systems engineered according to the longstanding 70 mile minimum interference contours, imposing substantial costs on carriers merely to re-evaluate existing plans;
- preclude incumbent licensees from converting to new FLEX-capable transmitting equipment; and
- create significant administrative burdens for the Commission staff, who will be required to review more complex interference showings.

Moreover, the Commission provides no persuasive rationale why the proposed change is needed. ProNet does not expect the proposed new contour formula to be significantly better, if an improvement

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<sup>22/</sup> For a hypothetical 931 MHz transmitter operating at 500 watts, 150 meters AAT, the new formula compresses the interference contour's radius from 80.5 km to 55 km, a 25 km swath which equates to a reduction of 4,182 square miles in this single transmitter's potential serving area.

<sup>23/</sup> As noted above, where an incumbent already covers the majority of a metropolitan area, its ability to serve subscribers at the fringes of its existing system will, in most cases, be far greater than a newly-authorized geographic licensee.

at all, in predicting real world coverage. The new formula does not account for terrain density, including foliage, buildings and other impediments which, far more than height above average terrain, account for degradation of signals. In addition, the existing 70 mile minimum contour has the advantages of simplicity and predictability, and the existing rules already provide for height and power adjustments to account for terrain conditions.<sup>24/</sup>

#### IV. COMPETITIVE BIDDING ISSUES

In response to the issues raised by the NPRM, ProNet urges the Commission to adopt a bidding design characterized by simultaneous multiple round bidding and no license grouping. ProNet thus envisions a simultaneous multiple round auction for all lowband CCP, 929 and 931 MHz paging channels.<sup>25/</sup>

Under this framework, auction participants will have access to the maximum amount of information available concerning the market for paging channels on a real time basis. As a result, bids will reflect all information known about the value of a paging channel at any single point in time. Bids will thus reflect the "true value" of a channel. In the event the Commission finds a simultaneous auction of all channels too unwieldy, ProNet's second

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<sup>24/</sup> ProNet would not object, however, to employment of the new formula to analyze interior and permissive expansion sites, if incumbents' composite system boundaries are determined by their existing 70 mile minimum interference contours.

<sup>25/</sup> As stated above (see text at pp. 4-6, supra), ProNet strongly advocates excluding shared PCP and SERS channels from geographic licensing and competitive bidding.

preference is to auction by band-- i.e., VHF CCP, UHF CCP and 929 and 931 MHz, separately.

Because it is supporting a multiple round auction, ProNet is compelled to comment on an appropriate stopping. ProNet strongly prefers a simultaneous stopping rule so that bidding remains open on all licenses until there is no bidding on any license. Coupled with this preference, ProNet advocates the Milgrom-Wilson activity rule to deter protracted auctions.

VI. CONCLUSION

Accordingly, the Commission should modify its geographic licensing and competitive bidding proposals as set forth above.

Respectfully submitted,

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